"PRESS-FIT"
Teflon terminals
"CON-HEX"
rf connectors
"SEALECTOBOARD"
program boards
"ACTAN"
programming switches
"DELTIME"
delay lines

D 26 D13-24

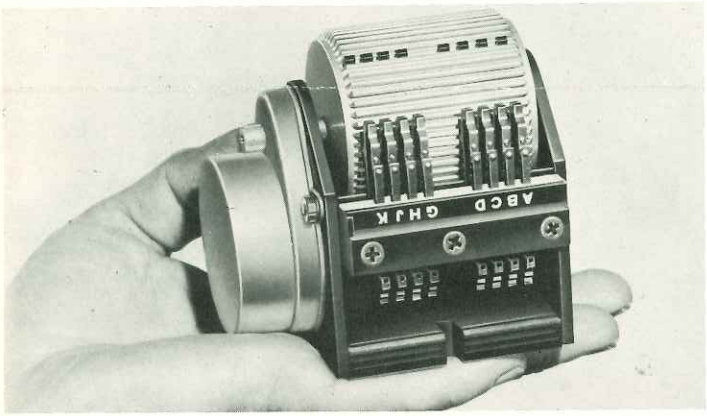
SEALECTRO

SEALECTRO TERMINALOGY

WESCON SPECIAL
VOL. 8 NO. 3
August, 1965

SEALECTRO CORPORATION • 225 Hoyt Street • Mamaroneck, N.Y.

WORLD'S SMALLEST ACTAN SWITCH TO HIGHLIGHT SEALECTRO WESCON EXHIBIT AT BOOTHS 2211-2212



A new ultra-miniature programming switch, called Mini-Actan, will be the highlight of the Sealectro exhibit at the WESCON Show. The new programmer is acclaimed to be a major breakthrough in both size and cost, measuring only 3½" L x 2¾" W x 3¼" H and selling for only $85, even less in quantity.

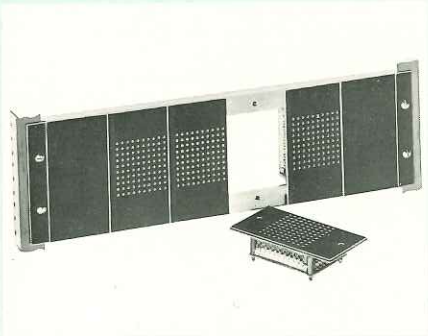
The Mini-Actan device is a complete programmer that provides time-based sequential control over 10 independent circuits. Its precision machined memory drum carries field-adjustable actuators past circuit control contacts. The drum is driven by a synchronous motor at a speed of 1 rpm. The sixty discrete program positions on the drum provide programming increments of one second each.

The Mini-Actan unit has 10 adjustable cams with up to 30 on/off segments. The color-coded cam segments are available in black, red, white and blue. The switches contacts are form C, single-pole, double-throw, with a choice of either normally open, or normally closed conditions.

"SEALECTOBOARD" WITH GROW POWER

A new Modular construction for the "Sealectoboard" cordless programming board will also be shown. This new type of construction allows a complete programming system to be built up from standard 10 x 10 single board units and expanded as requirements dictate. Modular "Sealectoboards" will be available with all required mounting hardware for standard rack mounting through authorized Sealectro distributors.

The Modular "Sealectoboard" system consists of only four standard component assemblies, designed to provide a built-in appearance when installed in a standard 19" EIA relay rack. The system can be expanded from a 10 x 10 matrix to a 10 x 60 hole matrix in one standard 5-7/32" x 19" rack panel. Additional panels can be added and interwired to expand program capacity in accordance with any requirements. A maximum size matrix of 9,000 holes can be built up in a standard 6-foot high by 19" wide cabinet by interconnecting fifteen 10 x 60 panels.

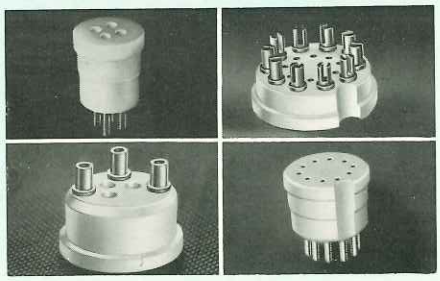


TRANSISTOR AND IC HARDWARE SHOWN

Sealectro's complete line of transistor sockets, pads, bushings, as well as a complete assortment of integrated circuit sockets will also be shown at the exhibit. These "Press-Fit" devices all feature Teflon bodies and heavy gold-plated contacts.

Included in the new line are 16 types of transistor holders that provide insulated thru-chassis lead holes and soldering lugs for transistor leads and circuit connections and 14 types of transistor sockets that provide plug-in receptacles for the transistor, plus terminals for circuit connections. Also featured are 10 types of "Press-Fit" or grommet type chassis mounting transistor bushings that provide support for the transistor can as well as six types of transistor pads that may be used where the unit is wired directly into the circuit, or with a holder or socket. The pads are designed to relieve strain on glass seals and provide insulation from the mounting surface.

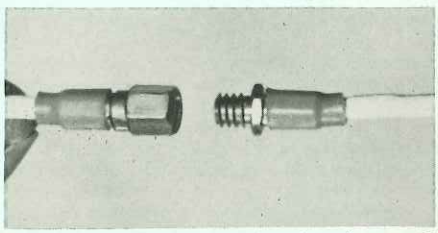
For special devices such as logic elements, integrated circuits or hybrid circuits having as many as 12 leads and packaged in TO-5 containers, two types of holders, three types of pads and four types of sockets will be shown.



MICROMIN CONNECTORS EXHIBITED

The R-F Components Division of Sealectro will exhibit their new line of MicroheX R-F connectors for subminiature coaxial cable. These new connectors are smaller than any other available and feature extremely rugged construction. Electrical performance is outstanding from DC to the microwave frequencies because of the connectors' close tolerance design, Teflon insulation and heavy gold plating.

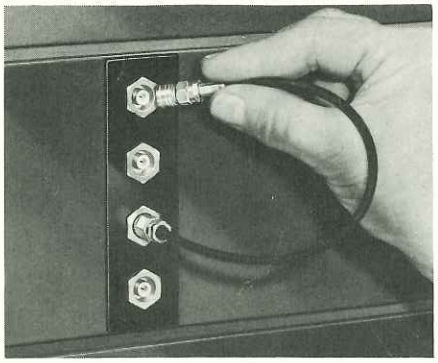
The new line of connectors is designed to be compatible with such coaxial cables as Teflon TFE insulated RG-196/U with a 0.080-inch O.D., and Teflon FEP insulated RG-178B/U with 0.075-inch O.D. They are at least 50% smaller in size and 400% lighter in weight than earlier types of connectors. VSWR is only 1.05:1 to 1.15:1, compared to 1.3:1 to 1.5:1 for typical larger connectors.



The Special Devices Division of Sealectro will display a new series of Deltime Sonic delay lines featuring a cast aluminum case. The new units provide improved electrical and physical characteristics.

All of these products will be on display in the Sealectro Booths #2211-2212, at WESCON. Complete technical literature will also be available at WESCON, or may be obtained by writing to Sealectro Corporation.

PLUGGABLE, COAX PATCHBOARDS NEW FOR R.F. AND A.F. APPLICATIONS



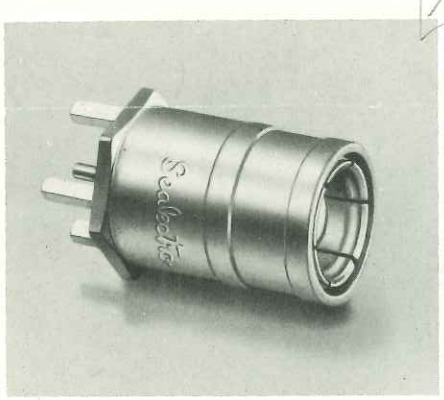
Complete, pluggable patching panels for applications requiring shielded or coaxial cabling are now available from Sealectro. These new panels provide a point-to-point patching capability for both A.F. and R.F. circuitry. Subminiature "ConheX" slide-on recessed bulkhead connectors are utilized with these new boards and provide exceptional electrical characteristics over the entire frequency spectrum. The exclusive "ConheX" recessed receptacle completely eliminates the usual protrusion of the receptacle beyond the panel surface, thus minimizing damage to the connectors.

Typical point-to point patching applications include sound system, R.F. equipment, digital equipment, T.V. Systems and oscilloscope displays.

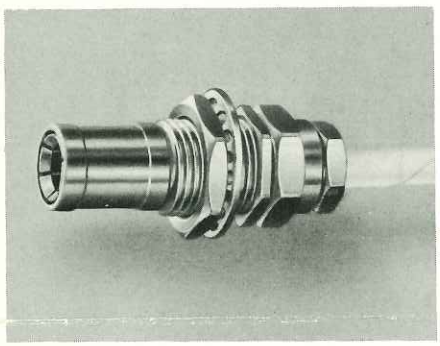
PRINTED CIRCUIT APPLICATIONS DEMAND NEW COAX CONNECTOR

A new subminiature coaxial connector providing increased stand-off height for printed circuit applications is now available from the R.F. Components Division of the Sealectro Corporation. The 51-152-0019 is a 75 ohm, snap-on connector which, in addition to extended height, offers a reliable quick disconnect engagement for use where space prohibits the use of wrenches required with screw-on types of mating engagements.

As with all "ConheX" connectors, the 51-152-0019 features heavy .0001" gold plating and Teflon insulation for maximum electrical performance over the widest possible frequency range. Reliable mechanical performance is assured through the use of heavy mounting posts located on standard .200" centers and captivated electrical contacts.



LONG MATING ENGAGEMENT FEATURED ON NEW "CONHEX" CONNECTOR



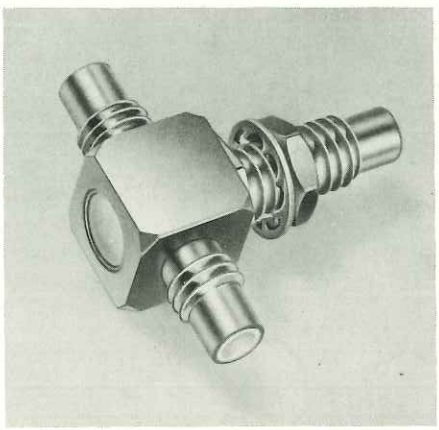
To meet unusual mounting problems common to systems utilizing modular type of construction, "ConheX" is now providing subminiature R.F. connectors with a special, longer, mating engagement. Typical of these new units is the 52-009-0019, a bulkhead mounted cable plug for slide-on mating engagements which is designed such that the mating of modular units is greatly simplified. Connector impedance is 50 ohms and cable clamp type of cable termination is used.

The 52-009-0019 connector additionally features heavy .0001" gold plating and Teflon insulation for maximum electrical efficiency. This unit provides superior VSWR from DC well into the higher microwave frequencies.

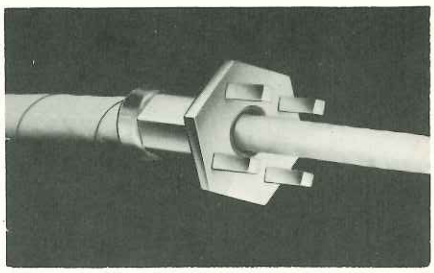
NEW "T" ADAPTER CONNECTS SUBMINIATURE COAX

A new "T" adapter for use with subminiature screw-on connectors is now available from "ConheX". A specially designed leg of the "T" serves as a mounting means for bulkhead mounting of the adapter as well as serving as a screw-on connector jack. This eliminates the need for an external mounting stud. The 50-083-0019 adapter is designed for use with 50 ohm lines and connectors and will mate with all standard "ConheX" 50 ohm screw-on units.

The 50-083-0019 is an adaptation of a standard "ConheX" subminiature connector and is typical of the units available to meet special application requirements. The "ConheX" Application Engineering Department is available to provide assistance whenever the more than 300 standard "ConheX" connectors do not offer a ready solution to a unique subminiature connector problem.



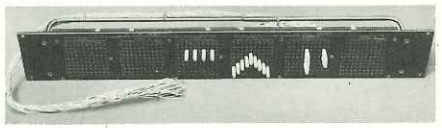
P. C. CONNECTOR OFFERED FOR SUBMINIATURE COAX



A new subminiature, printed circuit connector for subminiature coaxial cable is now available from the R.F. Components Division of Sealectro Corporation. The 55-138-0019 connector is designed to terminate the outer shield of a coaxial cable at the P.C. board while allowing the center conductor to extend beyond the connector for termination elsewhere on the printed circuitry.

Units are available for 50 ohm and 75 ohm cables and feature crimp type cable retention as well as heavy gold plating.

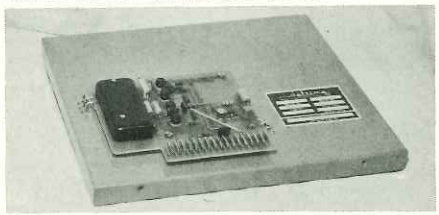
NEW "SEALECTOBOARD" HAS CABLE HARNESS SUPPORTS



"Sealectoboard" cordless programming boards are now available with optional cable harness securing facilities. Up to 600 individual wires of a multi-conductor cable may be secured on the new rigid supporting bars which are an integral part of the programming board array and which greatly facilitate cable routing to associated equipment.

The "Sealectoboard" is a matrix of multiple, vertically stacked planes of contact strips running at 90° to each other. These alternate X and Y insulated planes may be connected at each X-Y intersection by means of shorting pins, thus eliminating the need for cumbersome patchcord arrangements. Additionally, component holding pins are available that permit insertion of devices such as resistors, diodes, or lamps between the various decks at each intersection.

NEW 10-MILLISECOND DELAY LINE USES NEW 1-MC RZ P. C.



Sealectro's Deltime division has combined two new components into a single delay module to provide new delay capabilities beyond those previously available from Deltime.

The model 175A delay line package is a 10 millisecond package for 1 mc RZ operation and differs from other Deltime lines in physical dimension. The new package is smaller in length and width.

The new printed circuit, designated RZ-2, operates at different logic levels and power supply voltages than previous Deltime units. Input logic level is −3.25 V, output logic level is −5 V and the power supply voltages are − 20 volts. The two components are packaged together as a delay module and designated Part Number A22797.

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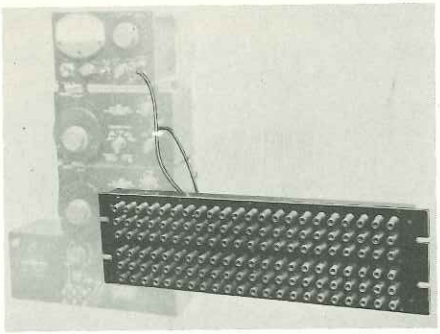
NEW BANANA JACK "SEALECTO-BOARD" ELIMINATES PATCH CORD DISARRAY

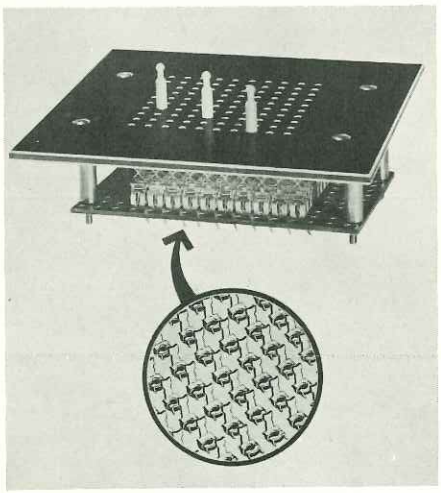


To eliminate the usual "rat's nest" of patch cords associated with test instrument set-ups, Sealectro Corporation is now offering banana jack "Sealectoboards". These new boards provide individual patch cord terminations which may be cross-connected in any manner required by the particular measurements being made. Spacing of the jacks is such that dual banana plugs may be inserted either horizontally or vertically.

If measurement equipment is permanently connected to the "Sealectoboard", outputs and inputs may be cross-connected in any desired manner with short patch cord jumpers. Provision is made for shield terminations when shielded cable is used.

In addition to the 132 jack board illustrated, units are available to meet many other instrument cross-connection requirements.

NEW MODULAR "SEALECTOBOARD" OFFERS TEN-POLE SWITCHING



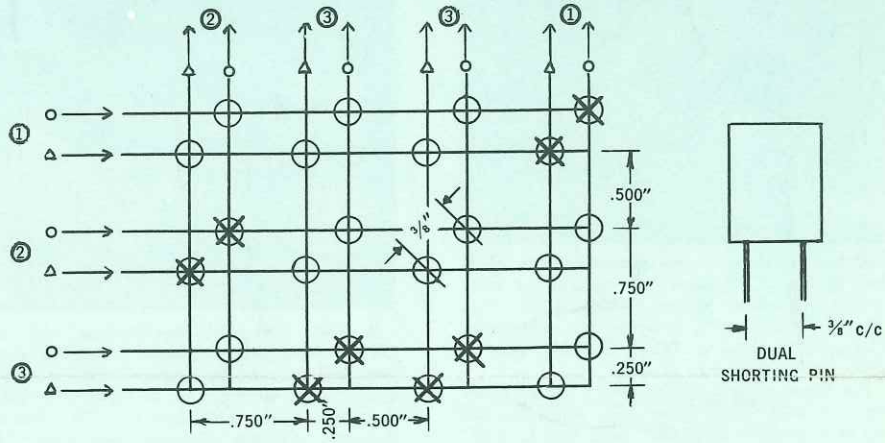
A new modular "Sealectoboard" with bussed upper and individual lower contacts provides from 1 to 10 pole, single throw, switching functions on each matrix line. Inserting a shorting pin in the appropriate matrix intersection electrically connects the upper contact buss with an individual lower contact.

Isolated terminations for every coordinate point on the matrix combined with the bussed upper contacts allow paralleling of inputs to a common signal line or distribution of single signals to multiple outputs. The new "Sealectoboard" is designed for modular applications and additional units can be stacked or mounted in standard rack mounting brackets for system expansion.

Additionally this unit may be used as a component interpositioning device when Sealectro component holders with diodes, resistors, etc., are utilized.

TECHNI-TIPS

Every day Sealectro receives dozens of requests for specific programming functions. The questions are so numerous, and so varied, that it would be impossible to print a catalog on our programming devices that would include all the answers to all the inquiries. We do attempt to distribute information on programming of a more general nature through the medium of Terminalogy. Two such examples follow:



PROGRAMMING PAIRS WITH "SEALECTOBOARD"

Problem: To switch a number of isolated "pairs" to a number of isolated "pair" output channels.

Solution: A "Sealectoboard" with cover plate drilled for diagonal "paired" holes and the use of Sealectro diagonal dual shorting pin.

The "Sealectoboard" is a highly versatile design inasmuch as it is fabricated to customer's requirements from standard components. The standard electrical cross-contact design, or matrix, fabricates to a .250" c/c pattern. In this particular application, a normal electrical matrix is fabricated. The face plate, however, is drilled, as shown above, on a .750" c/c pattern, with pairs of lines offset .250". The resulting pattern is a series of diagonal holes spaced approximately 3/8" c/c, which matches the dual shorting pin.

The result is a program board capable of channeling discrete "pairs" of circuits, always correctly polarized, and complete elimination of accidental crossover within "pairs".

SHORTING OR NON-SHORTING SWITCHING WITH "ACTAN" PROGRAMMER

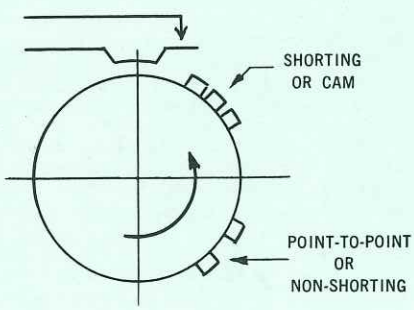
Problem: To mix shorting and non-shorting functions in a field-adjustable programming switch without special cams or hardware.

Solution: An "Actan" Programming Switch with adequate drum positions.

In planning a program the effects of "shorting" should always be considered. "Shorting" is the function of closing contacts of a succeeding program before the preceding program circuits are opened — ie., make before break. "Shorting" characteristics are the basis of a cam, whereby the contacts are held closed from position-to-position for the duration of the cam mode.

The "Actan" Programming Switch is so designed that if the actuators are located in adjacent grooves around the periphery of the drum, a "shorting" condition or "camming" mode is achieved. If one or more groove is left open, the switch becomes a "non-shorting", or point-to-point type. Therefore, if it is desired to have a 30-position, non-shorting or point-to-point program, a 60-groove "Actan" unit is used.

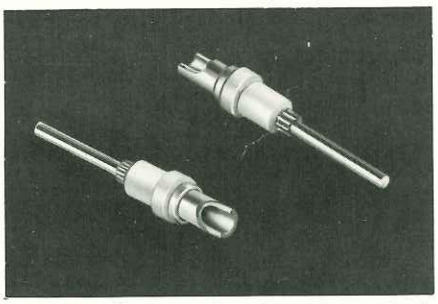
An important point to remember is that the "shorting" effect is not only at a single set of contacts, but the same condition will exist on adjacent contact stations — ie., Circuit #1 will not open until Circuit #2 closes, if their respective actuators have been programmed in adjacent drum grooves.



FOR COMPREHENSIVE ANSWERS TO YOUR PROGRAMMING REQUIREMENTS CONTACT SEALECTRO . . .

SEE SEALECTRO — WESCON BOOTHS 2211-2212

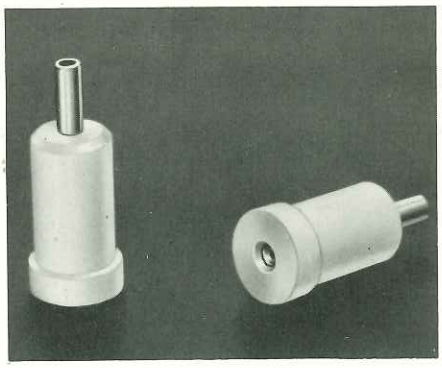
"PRESS-FIT" MICRO-MIN FEED-THRU DESIGNED FOR DENSE PACKAGING



A new addition to the microminiature feed-thru group of "Press-Fit" terminals for electronics assemblies is the FT-MM-7ML-6. This "Press-Fit" terminal is designed for very dense packaging, having a Teflon bushing with a .093" major diameter.

The upper section of the solder plated brass lug is a .120" high solder cup, while the tail end is a straight .025/.030" stud that is .565" long. Only 100% pure virgin Teflon is used in the bushing to assure maximum performance in all environmental conditions. Bushings are available in any of the standard EIA colors for easy circuit coding. A special insertion tool, designated B-O-1, is available for positive installation at production rates.

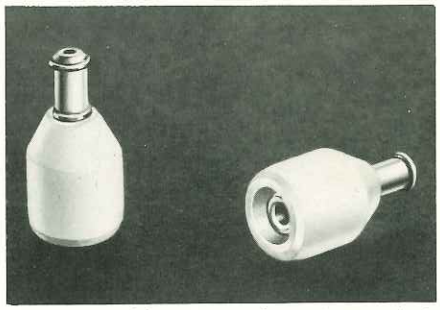
"PRESS-FIT" NON-FLOATING JACK DOUBLES AS DIODE SOCKET



A new "Press-Fit" non-floating jack, SKT-0290, is designed to accept a .029" diameter lead and may be used as a socket for diodes and crystals having pins or leads with similar diameters. The jack has a .172" diameter shoulder, a minor diameter measuring .148", and is .240" long. It is easily installed at production rates with an insertion tool, No. B-8-X, available from Sealectro Corporation.

Only 100% pure virgin Teflon is used for the "Press-Fit" bushings which are available in any of the standard EIA colors for easy circuit coding.

SPECIAL FEED-THRU DESIGNED FOR MOTOR HOUSING USE



A recent addition to Sealectro Corporation's terminal line is a special feed-thru, the FT-SM-75L2-C1, designed for installation in motor housings.

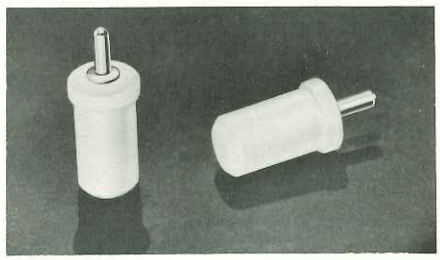
Not designed for "Press-Fit" installation, the feed-thru has a .172" diameter Teflon bushing without a shoulder. One end of the brass lug extends beyond the bushing .120". The other end is shrouded by the bushing to prevent inadvertent contact.

Sealectro uses only 100% pure virgin Teflon in bushings for all terminals — including "Press-Fits" — to guarantee maximum reliability under all environmental conditions. Most terminals can be ordered in any of the ten EIA colors for circuit coding.

LOW LUG STAND-OFF DESIGNED FOR 7/32" THICK CHASSIS

For applications where a low silhouette stand-off is required in an unusually heavy chassis, Sealectro Corporation has added to its extensive "Press-Fit" line part number ST-SM-10. The brass (solder finish) lug of this stand-off is .125" high above a .040" high shoulder. Minor diameter on the Teflon bushing is .148" by .250" long for positive installation in chassis up to 7/32" thick. A special insertion tool, No. B-8, is available for production rate installation.

"Press-Fit" terminals are available in nearly half-a-million styles of stand-offs, feed-thrus, probes and jacks, transistor sockets and holders, and similar sub-miniature parts for electronics assemblies. They are precision machined of quality metals and 100% pure virgin Teflon for maximum reliability in severe environments. For circuit coding, terminals in the line may be ordered with Teflon bushings in any of the standard EIA colors.



NEW TEFLON* DRY LUBRICANT PACKAGED IN AEROSOL CANS

Sealectro, long a manufacturer of complex electronic equipment, controls and programming devices used in automation and computer industries, has added a new product that has nothing to do with its other products. "Spray 'n Glide" is a dry lubricant that is designed to reduce the coefficient of friction between any two surfaces, be they stuck electronic gear or balky automobile hinges.

"Spray 'n Glide" is packaged in an aerosol can and is ideal for any surfaces requiring clean, greaseless, stainless or dripless lubrication. When sprayed on any surface, the solvent evaporates and the highly lubricant Teflon powder remains. This clean, white powder is unlike any solid lubricant such as graphite which is black and oily, or silicones which not only stain, but attract dust and dirt.

While working with the Teflon material used on "Press-Fit" terminals, Sealectro engineers found they could then disperse the resin in a solvent commonly used for dry cleaning. After more than two years of development work, Sealectro was able to have the lubricant packaged in aerosol spray containers, enabling users to cover hard-to-reach areas easily.

"Spray 'n Glide" is designed to free windows, stuck doors, drawers, and zippers. It can also be used to lubricate locks and hinges in automobiles, pulleys and lines on boats, chairs and casters in the office and bearings and bushings in the shop.

The new dry lubricant will be formally introduced at the National Hardware Show, September 20-24, 1965 at the New York Coliseum. "Spray 'n Glide" will be distributed by a Sealectro subsidiary, Saber Products Corporation, Mamaroneck, New York.

*Registered Trademark E. I. Dupont De Nemours & Co.

Spray 'n Glide - Registered Trademark Sealectro Corp.